ABSTRACT

A method is provided of regulating a supply voltage for providing a bit line voltage in a semiconductor memory device where the bit line voltage is provided to memory cells in a bit line from the supply voltage through a bit switch. A bit line current provided to the memory cells is detected. The supply voltage is adjusted responsive to the deducted bit line current to at least partially compensate for a voltage drop across the bit switch where the voltage drop is dependent at least in part on the bit line current.